

*Attend this 3-day seminar to learn how  
to control stormwater at the source,  
using microscale controls rather than  
conventional, centralized  
stormwater management practices!*

# **Low-Impact Development Workshop**



Sponsored by the  
**U.S. Army  
Environmental Center  
and  
Fort Lewis**



***28-30 October 2003***

**Fort Lewis Golf Course Clubhouse  
Fort Lewis, Washington**

# **Low-Impact Development Workshop**

## **Fort Lewis, Washington**

### **28–30 October 2003**

The seminar will involve engineers, planners, and environmental and natural resources managers in a practical site assessment and design exercise. Workshop participants will examine administrative and policy-related aspects of implementing low-impact development (LID) in construction, renovation, and landscaping projects.

#### **TUESDAY, 28 OCTOBER 2003**

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**0800 – 0830 Registration**

**0830 – 0840 Welcoming Remarks**

*TBD*

**0840 – 0855 Overview of Low-Impact Development and LID Implementation at Army Installations**

*Rosemary Queen, Natural Resources Branch Chief,  
U.S. Army Environmental Center*

**0855 – 0930 Overview of Related Laws, Regulations, and Policies**

*Helene Merkel, Program Manager, Horne Engineering*

**0930 – 0945 Break**

**0945 – 1045 Basic Principles and Practices of LID**

*Larry Coffman, Associate Director of Programs and  
Planning, Prince George's County, Maryland, Department  
of Environmental Resources*

**1045 – 1115 Role of LID Technology in Natural Resources and Ecosystem Protection**

*Larry Coffman*

**1115 – 1230 Lunch**

**1230 – 1300 Natural Resources and Ecosystem Planning Considerations**

*Helene Merkel*

**1300 – 1400 Analytical Methodologies and Design Issues**

*Larry Coffman*

**1400 – 1500 Detailed Case Studies: New Development and Urban Retrofits**

*Larry Coffman*

**1500 – 1515 Break**

**1515 – 1545 Detailed Army Case Studies**

*Helene Merkel*

**1545 – 1600 Discussion and Wrap Up**

# **Low-Impact Development Workshop**

## **Fort Lewis, Washington**

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#### **WEDNESDAY, 29 OCTOBER 2003**

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**0830 – 1000 LID Toolbox**  
*Larry Coffman*

**1000 – 1015 Break**

**1015 – 1100 Overview and Explanation of Field Exercise**  
*Priscilla Natasia, Stormwater Specialist, Fort Lewis  
Public Works, Environmental, and Natural Resources  
Division*

**1100 – 1230 Lunch**

**1230 – 1400 Field Exercise**

**1400 – 1415 Break**

**1415 – 1630 Design Charrette**

#### **THURSDAY, 30 OCTOBER 2003**

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**0830 – 1000 Design Presentations**

**1000 – 1015 Break**

**1015 – 1045 Incorporating LID into Existing Plans, Guidelines,  
and Specifications**  
*Helene Merkel*

**1045 – 1130 Cost Considerations**  
*Larry Coffman and Helene Merkel*

**1130 – 1300 Lunch**

**1300 – 1345 Maintenance, Upkeep, and Lessons Learned**  
*Larry Coffman*

**1345 – 1415 Overview of Funding Sources**  
*Helene Merkel*

**1415 – 1430 Wrap Up and Course Evaluation**

Low-impact development (LID) concepts and techniques are not new, but they are very different than current practices for handling stormwater, such as curbs, gutters, or stormwater retention basins. LID principles allow for stormwater capture and reuse, groundwater recharge, and reduction of impervious surfaces, thereby reducing surface water pollution. LID is an integral part of the SPiRiT guidelines and will be incorporated into Fort Lewis's sustainability program. The application of LID principles will also assist Fort Lewis in meeting new Phase II MS4s stormwater requirements.

## REGISTRATION

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Participation is free. Register by **17 October 2003** by contacting:  
[stormwater@lewis.army.mil](mailto:stormwater@lewis.army.mil)

253-966-1795      fax 253-966-4985

Please provide the following:

- name
- agency/organization
- title
- mailing address
- phone and fax numbers
- e-mail address

Direct inquiries for more information to 253-967-2326.

## HOTEL ACCOMMODATIONS

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These hotels have reserved blocks of rooms for workshop participants.

**GuestHouse International**      1609 McNeil St., Dupont, WA  
**Inn & Suites** (gov. rate \$79)      253-912-8900

**King Oscar Hotel**      8200 Quinault Dr., NE, Olympia, WA  
(gov. rate \$55)      888-254-5464

Refer to the LID conference when making reservations. The reserved rooms will only be available a short time; make your plans now!

## MEALS

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Participants will be responsible for all meals. Continental breakfasts are provided at the hotels, and breakfast and lunch are available at the clubhouse. Nearby restaurants offer additional options.

## DIRECTIONS TO FORT LEWIS GOLF CLUB CLUBHOUSE

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**From I-5, Heading North:** Take exit 116. Turn left off of the exit ramp. Cross the overpass, and the golf club will be on the right.

**From I-5, Heading South:** Take exit 116. Turn right off of the exit ramp. The golf club will be on the right.

***Did you know:*** Current stormwater conveyance systems focus on creating an efficient drainage system that will efficiently collect, convey, and discharge runoff. Though this system does prevent on-lot flooding, promotes good drainage, and quickly conveys runoff, it also decreases groundwater recharge and alters the natural hydrology of the watershed. Low-impact development practices focus on controlling stormwater at the source by the use of microscale controls that are distributed throughout the site. These multifunctional site designs incorporate alternative stormwater management practices, such as functional landscapes, depression storage, and open drainage swales, to create a more cost-effective and aesthetically pleasing form of stormwater control.